What is claimed as new and desired to be protected by Letters Patent of the United States is:

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1. An integrated circuit structure comprising:

at least one integrated circuit chip containing structures which may be affected by external magnetic fields, said integrated circuit chip having a front surface and a back surface, said front surface being supported by a chip carrier; and

a magnetic field shielding material in contact with said back surface of said chip.

2. The structure of claim 1, wherein said shielding material is in the form of a first layer of said magnetic field shielding material on said back surface.

3. The structure of claim 1, wherein said shielding material comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

4. The structure of claim 3, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

5. The structure of claim 3, wherein said magnetic material comprises a material which includes conductive particles.

6. The structure of claim 5, wherein said magnetic material comprises a material which includes nickel particles.

7. The structure of claim 5, wherein said magnetic material comprises a material which includes iron particles.

8. The structure of claim 5, wherein said magnetic material comprises a material which includes cobalt particles.

9. The structure of claim 1, wherein said chip contains a magnetic memory structure.

10. The structure of claim 9, wherein said magnetic memory structure is a magnetic random access memory device.

11. The structure of claim 1, wherein said chip carrier is a flip-chip carrier.

12. The structure of claim 11, wherein said flip-chip carrier further comprises a second magnetic field shielding layer.

13. The structure of claim 12, wherein said second magnetic field shielding layer comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

11 14. The structure of claim 13, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

12 15. The structure of claim 13, wherein said magnetic material comprises a material which includes conductive particles.

13 16. The structure of claim 15, wherein said magnetic material comprises a material which includes nickel particles.

14 17. The structure of claim 15, wherein said magnetic material comprises a material which includes cobalt particles.

15 18. The structure of claim 15, wherein said magnetic material comprises a material which includes iron particles.

16 19. The structure of claim 11 further comprising a printed circuit board having an upper surface and a bottom surface, said upper surface supporting said flip-chip carrier.

17 20. The structure of claim 19, wherein said printed circuit board further comprises a third magnetic field shielding layer.

18 21. The structure of claim 20, wherein said third magnetic field shielding layer is located on said upper surface of said printed circuit board.

19 22. The structure of claim 20, wherein said third magnetic field shielding layer is located on said bottom surface of said printed circuit board.

20 23. The structure of claim 20, wherein said third magnetic field shielding layer is embedded within said printed circuit board.

21 24. The structure of claim 20, wherein said third magnetic field shielding layer comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

22 25. The structure of claim 20, wherein said magnetic material comprises a material which includes conductive particles.

23 26. The structure of claim 25, wherein said magnetic material comprises a material which includes nickel particles.

24 27. The structure of claim 20, wherein said printed circuit board further comprises a fourth magnetic field shielding layer in contact with said bottom surface, said third magnetic field shielding layer being embedded within said printed circuit board.

25 28. The structure of claim 24, wherein each of said fourth and third magnetic field shielding layers comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

26 29. The structure of claim 25, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

27 30. The structure of claim 25, wherein said magnetic material comprises a material which includes conductive particles.

28 31. The structure of claim 27, wherein said magnetic material comprises a material which includes nickel particles.

32. An integrated circuit chip containing structures which may be affected by external magnetic fields, said chip comprising a magnetic field shielding material in contact with a surface of said chip.

33. The integrated circuit chip of claim 32, wherein said magnetic field shielding material comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

a printed circuit board electrically connected to said die carrier, said printed circuit board being in contact with a second layer of magnetic field shielding material.

30 65. The integrated circuit structure of claim 29, wherein said die carrier comprises a third layer of magnetic field shielding material.

31 66. The integrated circuit structure of claim 30, wherein each of said first, second and third layers of magnetic field shielding material comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

32 67. The integrated circuit structure of claim 31, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

33 68. The integrated circuit structure of claim 31, wherein said magnetic material comprises a material which includes conductive particles.

34 69. The integrated circuit structure of claim 33, wherein said conductive particles are selected from the group consisting of nickel particles, iron particles, and cobalt particles.

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70. A method of packaging a semiconductor device comprising:

76. The method of claim 72, wherein said second layer of magnetic field shielding material is formed on both a bottom surface and a top surface of said printed circuit board.

77. The method of claim 70, wherein said semiconductor device is a magnetic memory device.

78. The method of claim 77, wherein said magnetic memory device is a magnetic random access memory device.

79. The method of claim 70, wherein said first layer of magnetic field shielding material comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

80. The method of claim 79, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

81. The method of claim 79, wherein said magnetic material comprises a material which includes conductive particles.

82. The method of claim 81, wherein said conductive particles are selected from the group consisting of nickel particles, iron particles, and cobalt particles.

42 ~~83~~. The method of claim ~~71~~ 36, wherein said second layer of magnetic field shielding material comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

43 ~~84~~. The method of claim ~~83~~ 42, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

44 ~~85~~. The method of claim ~~83~~ 42, wherein said magnetic material comprises a material which includes conductive particles.

45 ~~86~~. The method of claim ~~85~~ 44, wherein said magnetic material comprises a material which includes nickel particles.

87. A method of forming a chip carrier for supporting an integrated circuit chip containing structures which may be affected by external magnetic fields, said method comprising:

forming an insulating layer over a first surface of a substrate;

providing a support surface for said integrated circuit chip; and

providing a layer of magnetic field shielding material which shields said integrated circuit chip from external magnetic fields.

34. The integrated circuit chip of claim 33, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

35. The integrated circuit chip of claim 33, wherein said magnetic material comprises a material which includes conductive particles.

36. The integrated circuit chip of claim 35, wherein said magnetic material comprises a material which includes nickel particles.

37. The integrated circuit chip of claim 35, wherein said magnetic material comprises a material which includes iron particles.

38. The integrated circuit chip of claim 35, wherein said magnetic material comprises a material which includes cobalt particles.

39. The integrated circuit chip of claim 32, wherein said chip contains a magnetic memory structure.

40. The integrated circuit chip of claim 39, wherein said magnetic memory structure is a magnetic random access memory device.

41. A chip carrier for supporting an integrated circuit chip containing structures which may be affected by external magnetic fields, said chip carrier comprising:

a substrate having a top surface and a bottom surface supporting first conductive elements;

an insulating layer over said top surface of said substrate, said insulating layer including a plurality of conductive traces which are connected to said first conductive elements;

a chip support surface over said insulating layer;

second conductive elements for connection between contacts of a chip supported on said support surface and said conductive traces; and

a layer of magnetic field shielding material.

42. The chip carrier of claim 41, wherein said magnetic field shielding material comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

43. The chip carrier of claim 42, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

44. The chip carrier of claim 42, wherein said magnetic material comprises a material which includes conductive particles.

45. The chip carrier of claim 44, wherein said magnetic material comprises a material which includes nickel particles.

46. The chip carrier of claim 44, wherein said magnetic material comprises a material which includes iron particles.

47. The chip carrier of claim 44, wherein said magnetic material comprises a material which includes cobalt particles.

48. The chip carrier of claim 41, wherein said layer of magnetic field shielding material is located in between said top surface of said substrate and said insulating layer.

49. The chip carrier of claim 41, wherein said layer of magnetic field shielding material is located on said bottom surface of said substrate.

50. The chip carrier of claim 41, wherein said layer of magnetic field shielding material is located over said top surface of said insulating layer.

51. The chip carrier of claim 41, wherein said integrated circuit chip contains a magnetic memory structure.

52. The chip carrier of claim 51, wherein said magnetic memory structure is a magnetic random access memory device.

53. A printed circuit board comprising:

a support body having a top surface and a bottom surface, said top surface being in contact with a flip-chip carrier; and

at least one layer of a magnetic field shielding material.

54. The printed circuit board of claim 53, wherein said layer of magnetic field shielding material is located on said top surface of said support body.

55. The printed circuit board of claim 53, wherein said layer of magnetic field shielding material is located on said bottom surface of said support body.

56. The printed circuit board of claim 53, wherein said layer of magnetic field shielding material is located on both said top and bottom surfaces of said support body.

57. The printed circuit board of claim 53, wherein said layer of magnetic field shielding material is embedded within said support body.

58. The printed circuit board of claim 53, wherein said layer of magnetic field shielding material comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

59. The printed circuit board of claim 53, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

60. The printed circuit board of claim 53, wherein said magnetic material comprises a material which includes conductive particles.

61. The printed circuit board of claim 60, wherein said conductive particles are selected from the group consisting of nickel particles, iron particles, and cobalt particles.

62. The printed circuit board of claim 53, further comprising an integrated circuit chip which contains a magnetic memory structure mounted on said top surface of said support body.

63. The circuit printed board of claim 62, wherein said magnetic memory structure is a magnetic random access memory device.

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64. An integrated circuit structure comprising:

a die electrically connected to a die carrier, said die being in contact with a first layer of magnetic field shielding material, said die further comprising a magnetic random access memory device; and

electrically coupling a die carrier to a first surface of a die, said first surface being opposite to a second surface of said die; and

contacting said second surface of said die with a first layer of magnetic field shielding material which shields said die from external magnetic fields.

Sub. B5 > 71. The method of claim 70 further comprising the act of electrically coupling said die carrier to a printed circuit board which has a second layer of magnetic field shielding material.

72. The method of claim 71, wherein said act of contacting said printed circuit board with said second layer of magnetic field shielding material wherein said second layer of magnetic field shielding material is formed on a surface of said printed circuit board.

73. The method of claim 72, wherein said second layer of magnetic field shielding material is formed on a top surface of said printed circuit board.

74. The method of claim 72, wherein said second layer of magnetic field shielding material is formed on a bottom surface of said printed circuit board.

75. The method of claim 72, wherein said second layer of magnetic field shielding material is embedded within said printed circuit board.

76. The method of claim 72, wherein said second layer of magnetic field shielding material is formed on both a bottom surface and a top surface of said printed circuit board.

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77. The method of claim 70, wherein said semiconductor device is a magnetic memory device.

78. The method of claim 77, wherein said magnetic memory device is a magnetic random access memory device.

79. The method of claim 70, wherein said first layer of magnetic field shielding material comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

80. The method of claim 79, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

81. The method of claim 79, wherein said magnetic material comprises a material which includes conductive particles.

82. The method of claim 81, wherein said conductive particles are selected from the group consisting of nickel particles, iron particles, and cobalt particles.

83. The method of claim 71, wherein said second layer of magnetic field shielding material comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

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84. The method of claim 83, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

85. The method of claim 83, wherein said magnetic material comprises a material which includes conductive particles.

86. The method of claim 85, wherein said magnetic material comprises a material which includes nickel particles.

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87. A method of forming a chip carrier for supporting an integrated circuit chip containing structures which may be affected by external magnetic fields, said method comprising:

forming an insulating layer over a first surface of a substrate;

providing a support surface for said integrated circuit chip; and

providing a layer of magnetic field shielding material which shields said integrated circuit chip from external magnetic fields.

88. The method of claim 87, wherein said layer of magnetic field shielding material is formed between said insulating layer and said first surface of said substrate.

89. The method of claim 87, wherein said layer of magnetic field shielding material is embedded within said substrate.

90. The method of claim 87, wherein said layer of magnetic field shielding material is formed on both a bottom surface and a top surface of said printed circuit board.

91. The method of claim 87, wherein said semiconductor device is a magnetic memory device.

92. The method of claim 91, wherein said magnetic memory device is a magnetic random access memory device.

93. The method of claim 87, wherein said layer of magnetic field shielding material comprises a magnetic material selected from the group consisting of ferrites, manganites, chromites and cobaltites.

94. The method of claim 93, wherein said magnetic material comprises MFe_2O_4, wherein M is at least one atom selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Mg.

95. The method of claim 93, wherein said magnetic material comprises a material which includes conductive particles.

96. The method of claim 95, wherein said conductive particles are selected from the group consisting of nickel particles, iron particles, and cobalt particles.